This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

Claim 1 (Previously presented):   A method comprising:

displaying a first graphical user interface (GUI) on a display screen, the first GUI being associated with one or more programs operatively configured on a first computing device; and

displaying a second GUI on said display screen over said first GUI, the second GUI being associated with one or more programs operatively configured on a second computing device that is operatively connected to said first computing device, and wherein said second GUI is displayed on substantially the full screen of said display screen and includes at least one identifier that identifies that said second GUI is not associated with said first computing device.

Claim 2 (Original): The method as recited in Claim 1, wherein at least one of said first and said second GUIs is a desktop GUI associated with an operating system.

Claim 3 (Original): The method as recited in Claim 1, wherein at least one of said first and said second GUIs is an application GUI associated with an application program.

Claim 4 (Original): The method as recited in Claim 1, wherein said second GUI is displayed in full screen mode on said display screen, such that none of said first GUI is visible to said user.

Claim 5 (Original): The method as recited in Claim 1, wherein said at least one identifier is selectively displayed for a defined period of time and then no longer displayed until reactivated.

Claim 6 (Original): The method as recited in Claim 5, wherein said at least one identifier is reactivated after a defined period of time expires since said at least one identifier was last displayed.

Claim 7 (Original): The method as recited in Claim 5, wherein said at least one identifier is reactivated after the user causes a pointing device controlled cursor to enter into a defined region of said second GUI.

Claim 8 (Original): The method as recited in Claim 5, wherein said at least one identifier is reactivated after the user causes a pointing device controlled cursor to enter into a defined region of said second GUI and said cursor remains in said region for a definable period of time.

Claim 9 (Original): The method as recited in Claim 1, wherein said at least one identifier is selectively displayed based on at least one user keyboard input.

Claim 10 (Original): The method as recited in Claim 1, wherein said at least one identifier is selectively displayed by said program operatively configured on said second computing device.

Claim 11 (Original): The method as recited in Claim 1, wherein said at least one identifier includes information identifying said second computing device.

Claim 12 (Original): The method as recited in Claim 1, wherein said at least one identifier includes at least one user selectable feature that is operatively configured to provide at least one user input to said second computing device.

Claim 13 (Previously presented): A method comprising:

generating graphical user interface (GUI) data suitable for being displayed on a display screen, the GUI data being associated with one or more programs operatively configured on a computing device that is configurable to be operatively coupled to another computing device,

wherein said another computing device is connected to said display screen and if displayed on said display screen said GUI data is configured to use substantially the full screen of said display screen, and

wherein said GUI data includes data for displaying at least one identifier that identifies that said GUI data is associated with said computing device, and identifies the GUI data from other GUI data associated with one or more programs.

Claim 14 (Original): The method as recited in Claim 13, wherein said GUI data includes desktop GUI data associated with an operating system running on said computing device.

Claim 15 (Original): The method as recited in Claim 13, wherein said GUI data includes application GUI data associated with an application program running on said computing device.

Claim 16 (Previously presented): A computer-readable medium having computer-executable instructions for performing acts comprising:

displaying a first graphical user interface (GUI) on a display screen, the first GUI being associated with one or more programs operatively configured on a first computing device; and

displaying a second GUI on said display screen over said first GUI, the second GUI being associated with one or more programs operatively configured on a second computing device that is operatively connected to said first computing device, and wherein said second GUI is displayed on substantially the full screen of said display screen and includes at least one identifier that identifies that said second GUI is not associated with said first computing device.

Claim 17 (Original): The computer-readable medium as recited in Claim 16, wherein at least one of said first and said second GUIs is a desktop GUI associated with an operating system.

Claim 18 (Original): The computer-readable medium as recited in Claim 16, wherein at least one of said first and said second GUIs is an application GUI associated with an application program.

Claim 19 (Original): The computer-readable medium as recited in Claim 16, wherein said at least one identifier is selectively displayed for a defined period of time and then no longer displayed until reactivated.

Claim 20 (Original): The computer-readable medium as recited in Claim 16, wherein said at least one identifier includes information identifying said second computing device.

Claim 21 (Original): The computer-readable medium as recited in Claim 16, wherein said at least one identifier includes at least one user selectable feature that is operatively configured to provide at least one user input to said second computing device.

Claim 22 (Previously presented): A computer-readable medium having computer-executable instructions for performing acts comprising:

generating graphical user interface (GUI) data suitable for being displayed on a display screen, the GUI data being associated with one or more programs operatively configured on a computing device that is configurable to be operatively coupled to another computing device,

wherein said another computing device is connected to said display screen and generating said GUI data such that if displayed on said display screen said GUI data uses substantially the full screen of said display screen, and

generating said GUI data to include data for displaying at least one identifier that identifies that said GUI data is associated with said computing device, and identifies the GUI data from other GUI data associated with one or more programs.

Claim 23 (Original): The computer-readable medium as recited in Claim 22, wherein said GUI data includes desktop GUI data associated with an operating system running on said computing device.

Claim 24 (Original): The computer-readable medium as recited in Claim 22, wherein said GUI data includes application GUI data associated with an application program running on said computing device.

Claim 25 (Previously presented): A system comprising:

a display screen;

a communication link;

a first computing device operatively coupled to said display screen and said communication link, and configured to display a first graphical user interface (GUI) on said display screen, the first GUI being associated with one or more programs running on said first computing device;

a second computing device operatively coupled to said communication link and thusly said first computing device, said second computing device being

configured to display a second GUI on said display screen over said first GUI, the second GUI being associated with one or more programs operatively configured on said second computing device, and wherein said second GUI is displayed on substantially the full screen of said display screen and includes at least one identifier that identifies that said second GUI is not associated with said first computing device.

Claim 26 (Original): The system as recited in Claim 25, wherein at least one of said first and said second GUIs is a desktop GUI associated with an operating system.

Claim 27 (Original): The system as recited in Claim 25, wherein at least one of said first and said second GUIs is an application GUI associated with an application program.

Claim 28 (Original): The system as recited in Claim 25, wherein said second GUI is displayed in full screen mode on said display screen, such that none of said first GUI is visible to said user.

Claim 29 (Original): The system as recited in Claim 25, wherein said at least one identifier is selectively displayed for a defined period of time and then no longer displayed until reactivated.

Claim 30 (Original): The system as recited in Claim 29, wherein said at least one identifier is reactivated after a defined period of time expires since said at least one identifier was last displayed.

Claim 31 (Original): The system as recited in Claim 29, wherein said at least one identifier is reactivated after the user causes a pointing device controlled cursor to enter into a defined region of said second GUI.

Claim 32 (Original): The system as recited in Claim 29, further comprising:

a pointing device operatively coupled to said first computing device; and

wherein said at least one identifier is reactivated after the user causes a pointing device controlled cursor to enter into a defined region of said second GUI and said cursor remains in said region for a definable period of time.

Claim 33 (Original): The system as recited in Claim 25, wherein said at least one identifier is selectively displayed based on at least one user keyboard input.

Claim 34 (Original): The system as recited in Claim 25, wherein said at least one identifier is selectively displayed by said second computing device.

Claim 34 (Original): The system as recited in Claim 25, wherein said at least one identifier includes information identifying said second computing device.

Claim 36 (Original): The system as recited in Claim 25, wherein said at least one identifier includes at least one user selectable feature that is operatively configured to provide at least one user input to said second computing device.

Claim 37 (Previously presented): An apparatus comprising:

a computing device capable of being operatively connected to at least one other computing device through an interconnecting communication channel, said computing device having logic configured to generate graphical user interface (GUI) data associated with one or more programs suitable for display on a display screen coupled to said other computing device, wherein if displayed on said display screen said GUI data is configured to use substantially the full screen of said display screen, and wherein said GUI data includes data for displaying at least one identifier that identifies that said GUI data is associated with said computing device, and identifies the GUI data from other GUI data associated with one or more programs.

Claim 38 (Original): The apparatus as recited in Claim 37, wherein said GUI data includes desktop GUI data associated with operating system logic configured on said computing device.

Claim 39 (Original): The apparatus as recited in Claim 37, wherein said GUI data includes application GUI data associated with application program logic configured on said computing device.

Claim 40 (Previously presented):   A method comprising:

displaying a first graphical user interface (GUI) on a display screen, the first GUI including a first object associated with a first program; and

displaying a second GUI on said display screen over said first GUI, the second GUI including a second object that is the same as the first object associated with a second program, and wherein said second GUI is displayed on substantially the full screen of said display screen and includes at least one identifier that identifies that said second GUI is not associated with said first program.

Claim 41 (Original): The method as recited in Claim 40, wherein at least one of said first and said second GUIs is a desktop GUI associated with an operating system.

Claim 42 (Original): The method as recited in Claim 40, wherein at least one of said first and said second GUIs is an application GUI associated with an application program.

Claim 43 (Original): The method as recited in Claim 40, wherein said second GUI is displayed in full screen mode on said display screen, such that none of said first GUI is visible to said user.

Claim 44 (Original): The method as recited in Claim 40, wherein said at least one identifier is selectively displayed for a defined period of time and then no longer displayed until reactivated.

Claim 45 (Original): The method as recited in Claim 44, wherein said at least one identifier is reactivated after a defined period of time expires since said at least one identifier was last displayed.

Claim 46 (Original): The method as recited in Claim 44, wherein said at least one identifier is reactivated after the user causes a pointing device controlled cursor to enter into a defined region of said second GUI.

Claim 47 (Original): The method as recited in Claim 44, wherein said at least one identifier is reactivated after the user causes a pointing device controlled cursor to enter into a defined region of said second GUI and said cursor remains in said region for a definable period of time.

Claim 48 (Original): The method as recited in Claim 40, wherein said at least one identifier is selectively displayed based on at least one user keyboard input.

Claim 49 (Original): The method as recited in Claim 40, wherein said at least one identifier includes information identifying said second program.

Claim 50 (Original): The method as recited in Claim 40, wherein said at least one identifier includes at least one user selectable feature that is operatively configured to provide at least one user input to said second program.

Claim 51 (Original): The method as recited in Claim 40, wherein said first program and said second program are operatively running on at least one processing unit within a single computer.

Claim 52 (Original): The method as recited in Claim 40, wherein said first program and said second program are operatively running on at processing units within different computers.

Claim 53 (Previously presented): A computer readable medium having computer implementable instructions for performing acts comprising:

displaying a first graphical user interface (GUI) on a display screen, the first GUI including a first object associated with a first program; and

displaying a second GUI on said display screen over said first GUI, the second GUI including a second object that is the same as the first object associated with a second program, and wherein said second GUI is displayed on substantially the full screen of said display screen and includes at least one identifier that identifies that said second GUI is not associated with said first program.

Claim 54 (Original): The computer readable medium as recited in Claim 53, wherein at least one of said first and said second GUIs is a desktop GUI associated with an operating system.

Claim 55 (Original): The computer readable medium as recited in Claim 53, wherein at least one of said first and said second GUIs is an application GUI associated with an application program.

Claim 56 (Original): The computer readable medium as recited in Claim 53, wherein said second GUI is displayed in full screen mode on said display screen, such that none of said first GUI is visible to said user.

Claim 57 (Original): The computer readable medium as recited in Claim 53, wherein said at least one identifier is selectively displayed for a defined period of time and then no longer displayed until reactivated.

Claim 58 (Original): The computer readable medium as recited in Claim 57, wherein said at least one identifier is reactivated after a defined period of time expires since said at least one identifier was last displayed.

Claim 59 (Original): The computer readable medium as recited in Claim 57, wherein said at least one identifier is reactivated after the user causes a pointing device controlled cursor to enter into a defined region of said second GUI.

Claim 60 (Original): The computer readable medium as recited in Claim 57, wherein said at least one identifier is reactivated after the user causes a pointing device controlled cursor to enter into a defined region of said second GUI and said cursor remains in said region for a definable period of time.

Claim 61 (Original): The computer readable medium as recited in Claim 53, wherein said at least one identifier is selectively displayed based on at least one user keyboard input.

Claim 62 (Original): The computer readable medium as recited in Claim 53, wherein said at least one identifier includes information identifying said second program.

Claim 63 (Original): The computer readable medium as recited in Claim 53, wherein said at least one identifier includes at least one user selectable feature that is operatively configured to provide at least one user input to said second program.

Claim 64 (Original): The computer readable medium as recited in Claim 53, wherein said first program and said second program are operatively running on at least one processing unit within a single computer.

Claim 65 (Original): The computer readable medium as recited in Claim 53, wherein said first program and said second program are operatively running on at processing units within different computers.

I (WE) CLAIM:

1.   A method for acquiring ultrasound data in volume rendering, the method comprising:

(a)   determining a viewing direction relative to a 3D space;

(b)   setting at least one parameter selected from a group of acquisition, beamforming, coherent image forming and image processing parameters as a function of the viewing direction; and

(c)   obtaining ultrasound data as a function of the at least one parameter prior to volume rendering, the ultrasound data representing the 3D space.

2.   The method of Claim 1 wherein (a) comprises receiving input from a user selecting the viewing direction, the 3D space being a volume adjacent to a transducer.

3.   The method of Claim 1 wherein (b) comprises setting the lateral axes of a plurality of scan planes as substantially perpendicular to the viewing direction, each scan plane of the plurality of scan planes spaced at a different position along the axis parallel to the viewing direction, and wherein (c) comprises acquiring ultrasound data representing the scan planes.

4.   The method of Claim 3 further comprising:

(d)   foreshortening the ultrasound data for each of the scan planes, the foreshortening for each of the scan planes being a function of an angle of the viewing direction to each of the scan planes.

5.   The method of Claim 3 further comprising:

(d)   shifting each of 2D areas representing respective scan planes relative to the other 2D areas as a function of a perceived position of the respective scan plane along the viewing direction.

6.   The method of Claim 5 further comprising:

       (e)   combining the ultrasound data for the foreshortened and shifted 2D
areas.

7.   The method of Claim 3 further comprising:

       (d)   persisting the ultrasound data for each of the scan planes together.

8.   The method of Claim 3 further comprising:

       (d)   determining a plurality of shells extending across the plurality of
scan planes; and

       (e)   rendering from the ultrasound data representing the plurality of
shells.

9.   The method of Claim 1 wherein (b) and (c) comprise establishing a
scanning coordinate system as a function of the viewing direction.

10.   The method of Claim 1 further comprising:

       (d)   changing the viewing direction; and

       (e)   repeating (b) and (c) in response to (d).

11.   The method of Claim 1 wherein (b) comprises setting an acquisition
parameter selected from the group of: lateral sampling grid, scan geometry, scan
pattern, firing sequence, data-sampling rate and combinations thereof;

       wherein (c) comprises obtaining the ultrasound data as a function of the
acquisition parameter.

12.   The method of Claim 1 wherein (b) comprises setting a beamforming
parameter selected from the group of: transmit apodization, receive apodization,
transmit focus, receive focus, number of substantially simultaneous transmit
beams, number of substantially simultaneous receive beams, transmit frequency,

receive frequency, cyclic phase aperture pattern, cyclic amplitude aperture pattern, and combinations thereof;

wherein (c) comprises obtaining the ultrasound data as a function of the beamforming parameter.

13. The method of Claim 1 wherein (b) comprises setting a coherent image forming parameter selected from the group of: an amount of lateral coherent processing in azimuth of beams, lateral filter variable, interpolation prior to amplitude detection and combinations thereof;

wherein (c) comprises obtaining the ultrasound data as a function of the phase difference image forming parameter.

14. The method of Claim 1 wherein (b) comprises setting an image processing parameters selected from the group of: an amount of spatial compounding, post-detection beam averaging, an amount of frequency compounding, an amount of lateral filtering, an amount of lateral gain, an adaptive processing value, an axial response value, an amount of incoherent summation in elevation of beams responsive to different transmit events and combinations thereof;

wherein (c) comprises acquiring the ultrasound data as a function of the image processing parameter.

15. A method for acquiring ultrasound data in volume rendering, the method comprising:

(a)   determining a viewing direction relative to a 3D space; and

(b)   setting a parameter for one of: an acquisition, a beamforming, a coherent image forming, an image processing and combinations thereof as a function of the viewing direction.

16. The method of Claim 15 further comprising:

(c)   performing at least one of reducing artifacts, increasing detail resolution and increasing a field of view along a display azimuth axis substantially perpendicular to the viewing direction by setting the parameter; and

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(d) performing one of increasing contrast and reducing temporal resolution along a display elevation axis substantially parallel to the viewing direction set by setting the parameter.

17. A method for volume rendering with ultrasound data, the method comprising:

(a) determining a viewing direction relative to a 3D space; and

(b) performing 2D scans along planes substantially perpendicular to the viewing direction along at least one dimension;

(c) foreshortening 2D areas corresponding to the 2D scans as a function of depth along the viewing direction;

(d) combining the ultrasound data representing the foreshortened 2D areas; and

(e) generating a 3D representation from the combined ultrasound data.

18, The method of Claim 17 further comprising:

(f) shifting the 2D areas corresponding to the 2D scans in depth along the viewing direction prior to (d);

19. The method of Claim 17 wherein (f) is performed free of interpolation to a 3D grid.

20. The method of Claim 17 wherein (c) and (d) are performed by a 2D scan converter and (e) is performed by a persistence filter.

21. A system for 3D imaging of ultrasound data, the system comprising:
a beamformer;
an acquisition controller connected with the beamformer;
a transducer connected with the beamformer; and
a user input operative to receive a selected viewing direction;
the acquisition controller operative to set a parameter of the beamformer as a function of the selected viewing direction.

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~~21.~~ The system of Claim 20 wherein the acquisition controller is operative to set one of a beamformer parameter and a coherent image forming parameter.

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~~22.~~ The system of Claim 20 wherein the acquisition controller is operative to set scan plane positions as a function of the selected viewing direction.

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~~23.~~ The system of Claim ~~22~~ further comprising:

a processor operable to foreshorten 2D areas corresponding to scan planes as a function of depth along the viewing direction and shift the 2D areas corresponding to the scan planes as a function of depth along the viewing direction;

a filter operable to combine the ultrasound data representing the foreshortened and shifted 2D areas; and

a display operable to generate a 3D representation from the combined ultrasound data.

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~~24.~~ The method of Claim 17 wherein (c) comprises foreshortening in the acoustic domain.

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~~25.~~ The method of Claim 18 wherein (f) comprises shifting in the acoustic domain.

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~~26.~~ The method of Claim 24 wherein (e) comprises scan converting.